

Active Recombinant Mouse Car7 protein, His-tagged

Cat. No. Car7-7842M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant Mouse Car7 protein(Q9ERQ8)(58-217 aa), fused with N-terminal His tag, was expressed in E.coli.
Species	Mouse
Source	E.coli
ProteinLength	58-217 aa
Form	PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Bio-activity	Carbonic anhydrase catalyzes the reversible reaction of $\text{CO}_2 + \text{H}_2\text{O} = \text{HCO}_3^- + \text{H}^+$, which is fundamental to many processes such as respiration, renal tubular acidification and bone resorption. Carbonic Anhydrase VII encoded by the CA7 gene is a cytosolic protein predominantly expressed in the salivary gland. CA7 may have additional tissue distributions and functions. For example, studies with CA inhibitors provide evidence that human CA7 is the CA isozyme responsible for the anticonvulsant/antiepileptic activity of sulfonamides and sulfamates. In fact, CA7 has been shown in a rat model to act as a developmental switch in GABAergic signaling in neurons. The activity of recombinant mouse CA7 was measured by its ability to hydrolyze 4-Nitrophenyl acetate (4-NPA) to 4-Nitrophenol. The reaction was performed in 12.5 mM Tris, 75 mM NaCl, pH 7.5 (assay buffer), initiated by addition 50 μL of various concentrations of CA7 (diluted by assay buffer) to 50 μL of 2 mM substrate 4-NPA (100 mM stock in Acetone, diluted by assay buffer). Incubated at

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37°C for 5min, then read at a wavelength of 400 nm.

Molecular Mass 19.2kDa

Endotoxin <1.0EU per 1µg (determined by the LAL method).

Purity > 90%

Storage Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Store at -20°C for 12 months. Aliquot and store at -80°C for 12 months.

Reconstitution Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

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